

# **Cumulative Effects Issues: Baseline Information for Farmland Past, Present, and Future**

## **INTRODUCTION**

The purpose of this baseline information on farmland is to analyze the cumulative effects of the Tier 1 Environmental Impact Statement for the proposed I-69 in southwestern Indiana. The information represents efforts to identify farmland land issues and to evaluate past, present, and future information for southwestern Indiana and the state.

## **GEOGRAPHIC AND TIME PERIOD CONTEXT:**

Farmland is one of four major resources that is being analyzed for cumulative impacts as a result of I-69. These four resources include farmland, forests, wetlands, and threatened and endangered species. These four resources were selected based upon their importance in southwestern Indiana as well as input from various resource agencies.

For farmland the geographic scope of the cumulative effects analysis is the 26-county study area. This study area was identified early in the project. The past, present, and future analysis of farmland will look not only at the 26-county study area but the entire state of Indiana as well.

The time period that will be studied for this cumulative effects analysis includes past years to present day. The earliest available information on farmland in Indiana is from 1900 (Indiana Agricultural Statistics Service, 2002). The analysis will also look into the future to identify future trends. This future analysis will be from present day to the year 2025. The year 2025 is also the future analysis year for the economic modeling and transportation demand modeling.

## **INDIANA FARMLAND - PAST AND PRESENT:**

At the time of settlement in Indiana, forests and wetlands covered the state and there was very little farmland. The earliest statistics show that in 1900, approximately 21.6 million acres of land was classified as farmland, comprising nearly the entire state of Indiana (Indiana Agricultural Statistics Service, 2002). In contrast, the Indiana Agricultural Statistics Service shows that in 1997, 15.1 million acres were classified as farmland. Between 1900 and 1997, over 6.5 million acres of Indiana's farmland was lost. Table 1 and Figure 1 from the Indiana Agricultural Statistics Service show this loss. The rate of loss from 1982 to 1997 is approximately 78,883 acres per year. This rate of loss translates into 0.52% of the total farmland in Indiana is being lost every year. .

Contributing factors to farmland loss include an increased demand for land due to Indiana's growing economy and population; urbanization of rural areas; and a gradual dispersal of population into smaller, less densely settled cities and towns.

While farmland acres are declining, production has been and continues to increase. Table 1 shows corn and soybean yields for Indiana from 1900 to 2001. Figures 2 and 3 show the growth in bushels per acre. Corn has increased from 41.5 bushels per acre to 156 bushels per acre over the last 100 years. In the last 20 years from 1982 to 2001, corn yields have increased from 126 to 156 bushels per acre, an increase of almost 24%. Likewise, soybeans have increase from 14 bushels per acre in 1930 to 49 bushels per acre in 2001. In the last 20 years, the soybean yields have increased from 38.5 to 49 bushels per acre, an increase of over 27% (Indiana Agricultural Statistics Service, 2002)

In spite of declining acreages of farmland, Indiana farmers have continued to increase production of corn and soybeans over the years.

## **SOUTHWESTERN INDIANA FARMLAND- PAST AND PRESENT:**

The study area identified for this project includes 26 counties in southwestern Indiana. Having identified the trends for farmland across the state of Indiana, the analysis of the trends in southwestern Indiana is the next step in developing this baseline information for the cumulative effects.

Table 2 shows the farmland acreages for the 26 counties in southwestern Indiana from 1982 to 1997 (Indiana Agricultural Statistics Service, 2002). Since 1982, farmland acreages have declined from 3,869,542 acres to 3,563,505 acres.

## **FARMLAND- FUTURE TRENDS:**

The farmland information collected for Indiana over the past 100 years (see Table 1) and for southwestern Indiana over the past 20 years (see Table 2) is shown in Figures 1 and 4. This past data was then projected into the future using regression analysis. These projections extend to the year 2025. Projecting beyond 2025 was considered too uncertain. The figures show the future trends for both Indiana and southwestern Indiana both as a trend line and as a regression equation.

Following the 2025 year time frame for future analysis, Figure 1 shows that by the year 2025, farmland in Indiana will be approximately 13,570,000 acres. This would represent a decline of approximately 1,541,000 acres from 1997. Translating this decline into percentages, this future analysis shows that approximately 10.2% of the total farmland in Indiana in 1997 will be lost by the year 2025.

For southwestern Indiana, the future trends in Figure 4 show that by the year 2025, farmland would be approximately 3,005,800 acres. This would represent a decline of approximately 558,000 acres from 1997. Translating this decline into percentages, this future analysis shows that approximately 15.65% of the total farmland in southwestern Indiana in 1997 will be lost by the year 2025. In terms of a loss per year of farmland, this decline is approximately 20,000 acres of farmland lost in southwestern Indiana per year.

Farmland is forecast to continue to decline. Based upon past trends as shown in Figures 2 and 3, corn and soybean production may continue to increase.

### **Resources and Publications:**

Indiana Agricultural Statistics Service. [www.nass.usda.gov/in/historic](http://www.nass.usda.gov/in/historic), May 2002.